tiveness ratios for stage 5 without and with CPEs were Rp7,870,936.19 and Rp7,137,874.93, respectively. ICERs was Rp1,486,786.41 for CKD stage 4 and Rp234,898.33 for CKD stage 5. **CONCLUSIONS:** Treatment of CKD stage 4 and 5 with CPE was more effective and cost-effective compared to those without CPE. The ICERs indicated that extra costs were required to increase life saved in both stages.

URINARY/KIDNEY DISORDERS - Patient-Reported Outcomes & Patient Preference Studies

PUK6

COMPARISON OF QUALITY OF LIFE BETWEEN HEMODIALYSIS AND PERITONEAL DIALYSIS PATIENTS IN A TERTIARY HOSPITAL IN CHINA

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OBJECTIVES: To compare health-related quality-of-life (HRQoL) in patients on hemodialysis (HD) and continuous ambulatory peritoneal dialysis (CAPD) in a tertiary hospital in China. **METHODS:** From September 2004 to January 2005, adult patients on HD or CAPD for at least 6 months were recruited with clinical and HRQoL data collected by medical records review and patient survey. Patients' HRQoL was assessed by KDQOL-SF including SF-36 as the generic and 11 disease-specific domains with higher scores indicating better HRQoL. **RESULTS:** Eighty-six patients [50 on CAPD and 36 on standard HD (3x4-hour weekly)] were included for the analysis, with 55% male and a mean age of 57.7±15.6 years. No differences were found in age, sex, education, payment method, income, originating disease, haemoglobin level, and dialysis time between HD and CAPD. CAPD patients had a higher score (SD) compared to HD patients for Effects of Kidney Disease (EKD: 55.1(15.8) vs. 40.8(10.2), p< .0001), Symptom/Problem List (SPL: 67.8(12.6) vs. 59.5(7.7), p= 0.0005), Quality of Social Interaction (QSI: 65.0(13.9) vs. 58.1(9.1), p= 0.006) and Patient Satisfaction (PS: 70.0(12.1) vs. 60.7(13.3), p=0.001). CAPD group vs. HD also had higher scores on Body Pain (BP: 60.2(14.2) vs. 45.4(18.1), p= 0.0003), General Health (GH: 33.6 (15.1) vs. 26.7(11.7), p=0.03), Role-Emotional (RE: 61.4(25.5) vs. 41.7(33.2), p=0.002) and Mental Health (MH: 67.3(14.0) vs. 55.3(19.4), p= 0.002) from SF-36 assessment. Controlling for key factors/covariates, CAPD patients still showed better scores comparing to HD patients in EKD, SPL, PS, BP, RE and MH. Older age, lower haemoglobin level and originating disease of hypertension were shown to be associated with lower scores of certain dimensions compared to their counterparts, respectively. **CONCLUSIONS:** CAPD patients showed better HRQoL in EKD, SPL, PS, BP, RE and MH than HD patients in this study population. The findings may help understand HRQoL burden and influential factors among dialysis patients.

RESEARCH POSTER PRESENTATIONS – SESSION II
RESEARCH ON METHODS STUDIES

RESEARCH ON METHODS - Clinical Outcomes Methods

PRM1

WHAT IS THE EVIDENCE ON USING SELECTED TYPES OF SUTURES FOR ABDOMINAL SURGERY – NOVEL APPROACH TO CREATE DYNAMIC TOOL FOR COLLETING AND REVIEWING AVAILABLE DATA

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OBJECTIVES: To obtain availability and assess the quality of existing evidence on effectiveness of poliglecaprone, polydioxanone and polyglactin-910 when used in different abdominal layers suturing. **METHODS:** Studies were identified by means of systematic search in MEDLINE, EMBASE and CENTRAL databases. Supplementary search for ongoing trials was also conducted. All studies published since 2000 and evaluating at least one of the selected interventions, with exception to case reports and cross sectional studies, were regarded as appropriate. Data selection was performed independently by two reviewers. Each study was characterized in detail according to predefined categories. Quality of those trials was assessed using Jadad or NOS scale depending on the type of the study. All information were subsequently exploited to create Dynamic Literature Catalogue – a novel toll for quick and efficient data reviewing. **RESULTS:** Among 119 positions qualified for full text analysis 40 publications met our inclusion criteria. Majority of those studies (n = 30) were designed as RCTs, eight were non-randomized comparative studies, one was conducted in a single arm scheme. Sixteen trials had their center location situated in Asia region. Twenty-six studies were considered as large trials including ≥ 100 patients. Target population comprised mainly adult patients. Main reported outcomes were wound infection or other complications, healing and cosmesis effects and patients satisfaction. All data extracted from publication were included in the Dynamic Literature Catalogue. To make reviewing of all selected information more efficient, we categorized them into several domains distinguished in accordance with PICO scheme. Appropriate filters allowing for quick data selection and analyzing were used in each domain. **CONCLUSIONS:** There is numerous of available evidence on using poliglecaprone, polydioxanone and polyglactin-910 in different abdominal layers suturing. We showed that reviewing and analyzing this data can be simplified and adjusted to different area of interest when Dynamic Literature Catalogue is used.

PRM2

DEVELOPMENT AND VALIDATION OF A HEALTH ECONOMIC MODEL FOR CORTICOSTEROID-INDUCED OSTEOPOROSIS IN POSTMENOPAUSAL WOMEN WITH RHEUMATOID ARTHRITIS IN JAPAN

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OBJECTIVES: Although the WHO fracture risk assessment tool (FRAX™) has been developed, its algorithm is unpublished and not necessarily available for economic evaluations. The purpose of this study was to develop a health economic model for assessing the cost-effectiveness of osteoporosis treatment in postmenopausal women with rheumatoid arthritis, who have received combination therapy including corticosteroids in Japan. **METHODS:** We constructed risk equations for age and bone mineral density (BMD)-specific fracture applying a series of methods proposed by De Laet CE et al (1997) to epidemiological data unique to Japanese. A state transition model with six health states (no fracture, post-vertebral fracture, post-hip fracture, post-vertebral and hip fracture, bedridden, and death) was developed to predict a ten year probability of hip fracture and the ten year probability of a major osteoporoetic fracture. Model validity was verified by comparison of the predicted fracture probabilities by different combination of age (55 to 65 years) and BMD (T-score -1.5 to -2.5) between the developed model and FRAX. **RESULTS:** Individual simulation for 1,000 women aged 55, 60 and 65 years resulted in the expected life years of 31.3 to 32.3, 27.1 to 27.9 and 22.9 to 23.6, respectively, about the same as in national life table in Japan. The predicted probability of hip fracture in women with T-score -1.5, -2.0 and -2.5 were ranged to 0.8 to 1.4%, 1.4 to 2.5% and 2.9 to 5.1%, respectively, and consistent with those of FRAX as follows: 0.8 to 1.9%, 1.5 to 3.1% and 2.8 to 5.2%, respectively. As expected, our model had the tendency to slightly underestimate the probability of a major fracture because the model did not consider an occurrence of humerus fracture and wrist fracture. **CONCLUSIONS:** The model newly developed was validated and helpful for determining the cost-effective treatment thresholds for corticosteroid-induced osteoporosis in postmenopausal women with rheumatoid arthritis.

RESEARCH ON METHODS - Cost Methods

PRM3

STANDARD COST LIST FOR ECONOMIC EVALUATION IN THAILAND

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OBJECTIVES: To develop standard unit costs of medical services provided by different health facilities, cost of patients coming for treatments, and reference values used in the economic evaluation. **METHODS:** The project was conducted as a number of sub-projects. Analysis of unit cost of medical services was conducted in 5 hospitals employing the relative value unit method. Cost of health center services was calculated in 19 health centers employing standard costing and micro-costing methods. Cost of pharmaceutical services was analysed in 11 hospitals. Logistics cost of vaccines under the national vaccination program covered the supply chain from the central supplier to provincial health offices. Cost of patients coming to have treatments was collected by interviewing 900 patients from 6 health centers, 3 district hospitals and 3 provincial/regional hospitals. Reference values were obtained from documentary research. **RESULTS:** The results were published in a book, and can be accessed via the Health Intervention and Technology Assessment (HITAP) website (http://db.hitap.net/). They are composed of 3091 items of hospital medical services in two categories of hospitals: district and provincial/regional hospitals. Services of hospital pharmacy departments, and health services provided by health centers, include 9 and 68 items, respectively. Logistics cost of vaccines is presented as cost per dose of the vaccine supplied. Cost of patients is composed of distance, time, transportation cost and meal cost. Reference values are useful years of capital assets (i.e. buildings, vehicles, furniture and equipment), minimum wage, and gross domestic product per capita. **CONCLUSIONS:** This standard cost menu and reference values should make economic evaluations faster and more convenient. This is the first standard cost menu to be developed for Thailand. Some limitations exist, which will be improved upon in the next revision.

PRM4

QALY AND PRODUCTIVITY LOSS: EMPIRICAL EVIDENCE FOR "DOUBLE COUNTING"

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OBJECTIVES: Some insist that productivity loss should not be included in costs when using quality-adjusted life year (QALY) because QALY also reflects the influence of work loss and thus results in "double counting." "Double counting" of QALY and productivity loss is a controversial issue, particularly given the lack of empirical data addressing the influence of income reduction on utility scores. **METHODS:** In this study, we performed a web-based, large-sample survey to address the issue of double counting. To determine the influence of income reduction on utility scores, we obtained utility scores of eight health states with three instruction types: a) no instruction; b) instructed to consider income reduction; and c) instructed not to consider income reduction (compensated). Respondents were randomly sampled from the on-line panel adjusted by age and sex. They were asked to evaluate one of 24 patterns by both standard gamble (SG) and time trade-off (TTO) methods. **RESULTS:** A total of 6551 respondents completed the questionnaire. Respondent demographics were similar to the Japanese general population. First, despite the lack of instruction on income reduction, many respondents spontaneously assumed lost income. The proportion tended to be higher when considering more severe health states. Second, the degree of assumed income reduction was related to utility scores. For a 10% income reduction, respondents assumed a 0.02 to 0.04 decrease in utility score (both SG and TTO methods). Third, utility scores did not change significantly, even when the decrease in income was compensated. In

our view, the effect of income does not only reflect money they lost. **CONCLUSIONS:** An assumed income reduction clearly influenced utility scores, however compensation for lost income fail to improve utility scores. Our results suggest that income does not significantly influence utility scores and that the impact of double counting is negligible.

PRM5

SYSTEMATIC REVIEW OF COST-UTILITY ANALYSES IN ASIA

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OBJECTIVES: To review published cost-utility analyses (CUA) targeted towards populations in Asia. **METHODS:** We examined data from the Tufts Medical Center Cost-Effectiveness Analysis Registry (www.cearegisty.org), which contains detailed information on more than 2,900 English-language CUAs in peer-reviewed journals. We focused on articles pertaining to Asian countries, summarized study features for articles published from 2000-2010, and compared those with CUAs in all other countries. **RESULTS:** Of 2,367 CUAs published during 2000-2010, 87 (3.7%) pertained to Asian countries: Japan (n=34), Taiwan (n=18), China (n=9), Thailand (n=7), Hong Kong (n=5), Singapore (n=5), South Korea (n=5), India (n=4), and Bangladesh (n=1). The CUAs contained 243 standardized incremental cost-effectiveness ratios (ICERs, expressed as $US2010 per QALY) and 357 utility weights. The most common type of intervention was pharmaceuticals (52.9%), followed by screening (21.8%), diagnostics (11.5%), and surgery (11.5%). 79 CUAs (90.8%) mentioned a cost-effectiveness threshold; of these, 60 said "good value for money" reflected a threshold below $50,000/QALY. The median reported ICER was $11,000/QALY, vs. $21,000/QALY for non-Asian studies. 75.7% of the reported ICERs were either dominant (less expensive and more effective) or below $50,000/QALY, compared to 63.9% in non-Asian CUAs ($p<0.001$). 13.6% of ICERs were either dominated (more expensive and less effective) or greater than $100,000/QALY, compared to 22.4% in non-Asian CUAs ($p=0.001$). CUAs targeted towards Asian populations generally adhered to good methodological practices, though the average quality score was modestly lower than the overall mean (4.08 vs. 4.43, $p=0.001$) and significantly more studies did not report funding sources (40.2% vs. 22.2%, $p<0.001$), compared with non-Asian CUAs. **CONCLUSIONS:** The number of CUAs in Asia has grown steadily with over half focused on pharmaceuticals. Compared to CUAs in all other countries, significantly more studies in Asia suggest efficient health interventions. These CUAs generally follow good methodological practices though reporting of funding sources could improve.

PRM6

TRANSFERABILITY OF INDIRECT COST OF CHRONIC DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS

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OBJECTIVES: Indirect cost is an important component in cost-of-illness assessment. This study explored the factors involved in the variation of reported indirect cost and investigated the feasibility of transferring indirect costs across settings. **METHODS:** A systematic literature review was conducted to identify studies estimating indirect costs for four selected chronic diseases, namely, asthma (AS), diabetes (DI), rheumatoid arthritis (RA), and schizophrenia (SC). Multiple linear regression was run to identify the factors that potentially explain the variation of reported indirect costs. Parametric (fixed and random-effect model) and non-parametric (bootstrapping method) meta-analyses were applied to local gross domestic product (GDP) per capita adjusted indirect costs for each disease. **RESULTS:** Systematic literature review identified 77 articles that reported indirect costs of AS (18), DI (20), RA (25), and SC (14) for literature synthesis. Substantial inter- and intra-disease variations among the indirect cost studies were observed, regarding the geographic distribution, methodology and magnitude of cost estimation. Regression analysis showed disease categories and local GDP per capita significantly ($P<0.001$) contributed to the variance of indirect cost. The range of intra-disease variation in indirect cost was subsatntially reduced after adjusting by and expressing as of local GDP/capita. GDP adjusted indirect cost in terms of percentage of local GDP/capita of AS was the lowest and that of SC was the highest. Bootstrapping estimation was relatively conservative with slightly larger confidence intervals than the parametric method with the mean (95%CI) of 2.12% (1.4089, 2.9332) on AS, 10.65% (7.215, 14.7438) on DI, 21.98% (17.4360, 27.0631) on RA, and 79.19% (52.4243, 117.833) on SC. **CONCLUSIONS:** It would be convenient and feasible to construct a universal reference range of indirect cost for a specific disease based on existing data and presented as a percentage of local GDP to assist local decision making in jurisdictions where indirect cost data are not available.

PRM8

COSTING ISSUE IN PHARMACOECONOMIC STUDIES FROM THE PERSPECTIVE OF SINGAPORE PUBLIC HEALTH CARE PROVIDER

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OBJECTIVES: Singapore has a modified universal health care system in which subsidy rates are pegged to household incomes and other socioeconomic attributes. Out-of-pocket charges vary considerably for each service and level of subsidy. Hence, costing issue needs to be carefully considered in cost utility study in the context of Singapore, depending on the perspective from which the analyses are performed. This research was to explore the costing consideration for different possible scenarios through an illustrative cost utility analysis. **METHODS:** Using the incremental cost and QALY gained data presented in a published cost utility analysis of a treatment for breast cancer in the context of Singapore, hypothetical scenarios were assumed for different levels of subsidy (50%, 75% and 100%) covered by the public health care provider that a patient might receive at a government restructure hospital. Assuming the QALY gained remains the same, incremental cost per QALY gained (ICER) was computed for each scenario from the perspective of the public health care provider. **RESULTS:** For a fully subsidy scenario (100%), the total incremental cost was S$62,770. In the case of subsidy rates at 50% and 75%, the incremental total costs were S$31,385 and S$47,077, respectively. For the same expected gained of 1.70 QALYs, the resulting ICERs were S$18,462, S$27,692 and S$36,924 for scenarios of 50%, 75% and 100% subsidy rates, respectively. **CONCLUSIONS:** Due to the possible different subsidy rates for most of the costing items in a cost utility analysis, careful consideration with explicit cost computation from a clearly defined perspective is recommended. A weighted total cost based on the distribution of possible subsidy levels and relevant sensitivity analyses should be considered in a pharmacoeconomic study from the perspective of the public health care provider of Singapore.

PRM9

DATA REQUIREMENTS FOR COST EFFECTIVENESS ANALYSIS IN KOREA AND AUSTRALIA: A COMPARISON

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OBJECTIVES: Both Korea and Australia have stringent pharmaco-economic (PE) guidelines outlining the data requirements for cost effectiveness analysis (CEA). The requirements for regulatory approval in both countries are clear and mainly rely on multinational clinical trials with the addition of relative small bridging studies in Korea. It seems, however, to be different for reimbursement submission where CEAs are presented.The purpose of this study is to uncover the data requirements for CEA from an industry perspective. **METHODS:** Firstly a literature search was performed to find any relevant publications. Moreover website of decision maker's were searched for past reimbursement decisions. Finally a qualitative comparison was made of the PE guidelines for Korea and Australia. **RESULTS:** The literature search revealed very little published literature on CEAs as part of drug reimbursement submissions in Korea and Australia. Decision makers in both countries publish reimbursement decisions on their respective website. However the information disclosed rarely reveals what input data was used for CEAs. The PE guidelines for the respective countries showed remarkable similar data requirements. The main difference is surrounding local resource data. In Korea this usually retrieved through information gathering exercises like cost and utilisation studies. It is quite different in Australia where most information is available either through a government website or as IMS data. **CONCLUSIONS:** Both Korea and Australia has specific requirements for CEAs however the local data needed for each country differs significantly. Acquiring cost and utilisation data in Australia seems straight forward in most cases, whereas the situation is different in Korea. Not only does it have an impact on time to market for new innovative pharmaceuticals but it also increases the uncertainty surrounding the result of the CEA making it more difficult for decision makers to make a decision.

RESEARCH ON METHODS - Databases & Management Methods

PRM10

OVERVIEW OF THE PROLABELS DATABASE SIX YEARS AFTER ITS IMPLEMENTATION

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OBJECTIVES: The PROLabels database (www.mapi-prolabels.org) is a unique online tool collecting information on the medical and biological products for which the Food and Drug Administration (FDA) and the European Medicines Agency (EMA) have granted a Patient-Reported Outcome (PRO) labeling claim. The purpose of this abstract is to present an overview of the database six years after its implementation in April 2006. **METHODS:** To create the database, data were retrieved on the EMA website, from the European Public Assessment Reports for all the drugs approved through a centralized procedure since 1995. Evidence of a PRO endpoint was pulled for each product from the Summary of Product Characteristics and, when necessary, additional information was gathered from the scientific discussions. From the FDA website, data were collected from the approved labels and additional information was retrieved in the Medical Reviews. The database now contains all drugs approved or revised by the FDA since 1995, including Biological Approvals (BLAs). For the purpose of this review, all approvals between 1995 and 2011 were reviewed individually for each agency. **RESULTS:** As of December 31, 2011, the database contains 486 records of which 342 products were approved by the FDA (22.6% of all FDA approvals). There were 144 products with a PRO claim approved by the EMA (24.2% of all EMA approvals). Nervous system diseases is the therapeutic area for which the highest number of products is approved with a PRO claim (n=153), followed by the immune system diseases (n=105). Signs and symptoms are the most frequently measured PROs while health-related quality-of-life represents only 16.9% of all drugs approved with a PRO claim. **CONCLUSIONS:** The PROLabels database provides easy access to information regarding PRO claims in approved labels for both FDA and EMA in one location and information about PRO claims trends in the USA and Europe.

PRM11

EVIDENCE FOR VALIDITY OF A NATIONAL PATIENT-REPORTED SURVEY IN JAPAN: THE JAPAN NATIONAL HEALTH AND WELLNESS SURVEY

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